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EXAMINER	
PARTON, KEVIN S	

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2153	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/777,190	BERNARDIN ET AL.	
	Examiner	Art Unit	
	Kevin Parton	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 February 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "the," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it has less than the minimum required number of words. Also, the abstract does not provide enough detail as to the functions of the claimed invention. Correction is required. See MPEP § 608.01(b).

Drawings

3. The drawings are objected to because figure 1 contains no identification labels. Each part of the figure must be labeled. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the phrase "behave substantially like" is unclear.

6. Claim 53 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the phrase "or substantially all" is unclear.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-4, 20, 21, 28, 33, 38-40, 46-48, and 53-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Kisor (USPN 6,098,091).

9. Regarding claim 1, Kisor (USPN 6,098,091) teaches a system for improving quality-of-service in a distributed computing system, the system including a multiplicity of network connected worker processors and at least one supervisory processor, the supervisory processor configured to assign tasks to the worker processors (column 4, lines 45-50) with means for:

a. Identifying one or more of the tasks as critical task(s) (column 4, lines 62-64).
b. Assigning each of the tasks, including the critical task(s), to a worker processor (column 6, lines 16-19).
c. Redundantly assigning each of the one or more critical task(s) to a worker processor (column 6, lines 20-22).
d. Monitoring the status of the assigned tasks to determine when all of the tasks have been completed by at least one worker processor (column 6, lines 43-59).

10. Regarding claim 2, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 1. He further teaches means for monitoring, on a substantially continuous basis, the status of at least the worker processor(s) that have been assigned the non-critical task(s) (column 6, lines 43-59).

11. Regarding claim 3, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 2. He further teaches means wherein monitoring, on a substantially continuous basis, the status of at least the worker processor(s) that have been assigned the non-critical task(s) comprises receiving status messages from at least each of the worker processor(s) that have been assigned non-critical task(s) until each the processor completes its assigned task (column 6, lines 43-59).

12. Regarding claim 4, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 2. He further teaches means wherein monitoring, on a substantially continuous basis, the status of at least the worker processor(s) that have been assigned the non-critical task(s) comprises detecting abnormalities in the operation of the worker processor(s) that have been assigned non-critical task(s), and/or their associated network connections, by detecting an absence of expected status message(s) received by the at least one supervisory processor (column 6, lines 43-59).

13. Regarding claim 20, Kisor (USPN 6,098,091) teaches a system for operating a peer-to-peer distributed computing system with means for:

a. Providing a pool of worker processors, each having installed worker processor software, and each connected to an always-on, peer-to-peer computer network (figure 1; column 3, lines 47-49; column 4, lines 45-50).

b. Providing at least one supervisory processor, also connected to the always-on, peer-to-peer computer network (column 4, lines 45-50).

c. Using the at least one supervisory processor to monitor the status of worker processors expected to be engaged in the processing of assigned tasks (column 6, lines 43-59).

d. Using the at least one supervisory processor to redundantly assign one more critical task(s) to one or more additional worker (column 6, lines 20-22).

14. Regarding claim 21, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 20. He further teaches means wherein providing a pool of worker processors further includes ensuring that each of the worker processors is linked to the always-on, peer-to-peer computer network through a high bandwidth connection (column 6, lines 40-43).

15. Regarding claim 28, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 20. He further teaches means wherein using the at least one supervisory processor to monitor the status of worker processors expected to be engaged in the processing of assigned tasks includes sending a status-request message to, and receiving a return acknowledgement from, each worker processor that is expected to be engaged in the processing of assigned tasks (column 6, lines 43-59).

16. Regarding claim 33, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 20. He further teaches means wherein using the at least one supervisory processor to monitor the status of worker processors expected to be engaged in the processing of assigned tasks includes periodically checking to ensure that a heartbeat message has been received, within

a preselected frequency interval, from each worker processor that is expected to be engaged in the processing of assigned tasks (column 6, lines 43-59).

17. Regarding claim 38, Kisor (USPN 6,098,091) teaches a system for performing a job using a peer-to-peer network-connected distributed computing system, the job comprising a plurality of tasks, with means for:

a. Initiating execution of each of the plurality of tasks on a different processor connected to the peer-to-peer computer network (column 6, lines 12-19).

b. Initiating redundant execution of at least one of the plurality of tasks on yet a different processor connected to the peer-to-peer computer network (column 6, lines 20-22).

c. Once each of the plurality of tasks has been completed by at least one processor, reporting completion of the job via the peer-to-peer computer network (column 6, lines 43-59).

18. Regarding claim 39, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 38. He further teaches means wherein the at least one of the plurality of tasks that is/are redundantly assigned is/are critical tasks (column 6, lines 20-22).

19. Regarding claim 40, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 38. He further teaches means for monitoring, on a periodic basis, to ensure that progress is being made toward completion of the job (column 6, lines 43-59).

20. Regarding claim 46, Kisor (USPN 6,098,091) teaches a system for performing a job using a plurality of independent, network-connected processors, the job comprising a plurality of tasks, with means for:

a. Assigning each of the plurality of tasks to a different processor connected to the computer network (column 6, lines 12-19).

b. Redundantly assigning at least some, but not all, of the plurality of tasks to additional processors connected to the computer network (column 6, lines 20-22).

c. Using the computer network to compile results from the assigned tasks and report completion of the job (column 6, lines 43-59).

21. Regarding claim 47, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 46. He further teaches means wherein redundantly assigning at least some of the plurality of tasks to additional processors comprises assigning critical tasks to additional processors (column 6, lines 20-22).

22. Regarding claim 48, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 46. He further teaches means wherein redundantly assigning at least some of the plurality of tasks to additional processors comprises assigning at least one critical task to at least two additional processors (column 6, lines 20-22).

23. Regarding claim 53, Kisor (USPN 6,098,091) teaches a system for performing a job using a pool of network-connected processors, the job comprising a plurality of tasks, the number of processors in the pool greater than the number of tasks in the job, with means for:

a. Assigning each of the plurality of tasks to at least one processor in the pool (column 6, lines 12-19).

b. Redundantly assigning at least some of the plurality of tasks until all, or substantially all, of the processors in the pool have been assigned a task (column 6, lines 20-22).

c. Using the computer network to compile results from the assigned tasks and report completion of the job (column 6, lines 43-59).

24. Regarding claim 54, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 53. He further teaches means wherein redundantly assigning at least some of the plurality of tasks includes redundantly assigning a plurality of critical tasks (column 6, lines 20-22).

25. Regarding claim 55, Kisor (USPN 6,098,091) teaches a system for u sing redundancy in a network-based distributed processing system to avoid or mitigate delays from failures and/or slowdowns of individual processing elements, with means for:

a. Receiving a job request, from a client, over the network (column 4, lines 45-50).

b. Processing the job request to determine the number, K, of individual tasks to be assigned to individual network-connected processing elements (column 4, lines 45-50).

c. Determining a subset, N, of the K tasks whose completion is most critical to the overall completion of the job (column 6, lines 12-15, 20-22).

d. Assigning each of the K tasks to an individual network-connected processing element (column 6, lines 12-19).

e. Redundantly assigning at least some of the N task(s) in the subset to additional network-connected processing element(s) (column 6, lines 20-22).

26. Regarding claim 56, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means wherein determining the subset, N, of the K tasks whose completion is most critical to the overall completion of the job includes assigning, to the subset, task(s) that must be completed before other task(s) can be commenced (figure 4, elements 404, 408, 412).

27. Regarding claim 57, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means wherein determining the subset, N, of the K tasks whose completion is most critical to the overall completion of the job includes assigning, to the subset, task(s) that supply data to other task(s) (figure 4, column 6, lines 12-20).

28. Regarding claim 58, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means wherein determining the subset, N, of the K tasks whose completion is most critical to the overall completion of the job includes assigning, to the subset, task(s) that is/are likely to require the largest amount of memory (column 6, lines 12-15, 22-30).

29. Regarding claim 59, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means wherein determining the subset, N, of the K tasks whose completion is most critical to the overall completion of the job includes assigning, to the subset, task(s) that is/are likely to require the largest amount of local disk space (column 6, lines 12-15, 22-30).

30. Regarding claim 60, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means wherein determining the subset, N, of the K tasks whose completion is most critical to the overall completion of the job includes assigning, to the subset,

task(s) that is/are likely to require the largest amount of processor time (column 6, lines 12-15, 22-30).

31. Regarding claim 61, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means wherein determining the subset, N, of the K tasks whose completion is most critical to the overall completion of the job includes assigning, to the subset, task(s) that is/are likely to require the largest amount of data communication over the network (column 6, lines 12-15, 22-30).

32. Regarding claim 62, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 55. He further teaches means for determining, based on completions of certain of the K tasks and/or N redundant task(s), that sufficient tasks have been completed to compile job results; and, reporting job results to the client over the network (column 6, lines 40-59).

33. Regarding claim 63, Kisor (USPN 6,098,091) teaches a system for using a group of network-connected processing elements to process a job, the job comprised of a plurality of tasks, one or more of which are critical tasks, with means for:

a. Identifying a one or more higher-capacity processing elements among the group of network-connected processing elements (column 6, lines 22-30).
b. Assigning at least one critical task to at least one of the identified higher-capacity processing elements (column 6, lines 16-19).
c. Assigning other tasks to other processing elements such that each task in the job has been assigned to at least one processing element (column 6, lines 16-19).

d. Communicating results from the assigned tasks over the network (column 6, lines 43-59).

34. Regarding claims 64-66, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 63. He further teaches means wherein identifying one or more higher-capacity processing elements among the group of network-connected processing elements includes evaluating or determining the processing capacity of processing elements in the group based on each of the following:

a. Their execution of previously assigned tasks (column 5, lines 32-52).

b. Assigned benchmark tasks (column 5, lines 32-53).

c. Evaluating hardware configurations of at least a plurality of processing elements (column 5, lines 32-53).

35. Regarding claim 67, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 63. He further teaches means for ensuring that each critical task in the job is assigned to a higher-capacity processing element (column 6, lines 12-30).

36. Regarding claim 68, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 63. He further teaches means for:

a. Storing the amount of time used by the processing elements to execute the assigned tasks (figure 3A, element 329).

b. Computing a cost for the job based, at least in part, on the stored task execution times (column 6, lines 12-30; figure 3A, element 328).

37. Regarding claim 69, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 68. He further teaches means wherein computing a cost for the job based, at least in part,

on the stored task execution times includes charging a higher incremental rate for time spent executing tasks on higher-capability processing elements than for time spent executing tasks on other processing elements (column 6, lines 63-66).

38. Regarding claim 70, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 68. He further teaches means for communicating the computed cost for the job over the network (column 6, lines 63-66).

39. Regarding claim 71, Kisor (USPN 6,098,091) teaches a system comprising:

a. A multiplicity of worker processors (column 4, lines 45-50).

b. At least one supervisory processor, configured to assign tasks to, and monitor the status of, the worker processors, the at least one supervisory processor further configured to assign each critical task to at least two worker processors (column 6, lines 12-59).

c. An always-on, peer-to-peer computer network linking the worker processors and the supervisory processor(s) (column 3, lines 47-49).

d. At least one of the at least one supervisory processor(s) including a monitoring module, which monitors the status of worker processors expected to be executing assigned tasks to ensure that the distributed computing system maintains always-live operation (column 6, lines 43-59).

40. Regarding claim 72, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 71. He further teaches means wherein the monitoring module receives status messages from at least each one of the worker processors expected to be executing assigned tasks (column 6, lines 43-59).

41. Regarding claim 73, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 72. He further teaches means wherein the monitoring module detects abnormalities in the operation of the worker processors expected to be executing assigned tasks, and/or their associated network connections, by detecting an absence of expected status messages received from the worker processors (column 6, lines 43-59).

Claim Rejections - 35 USC § 103

42. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

43. Claims 5-8, 22-27, 29-32, 34-37, 41-45, 49-52, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisor (USPN 6,098,091).

44. Regarding claim 5, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 4. He further teaches means wherein the act of detecting an absence of expected status message(s) received by the at least one supervisory processor is repeated periodically according to a time interval (column 6, lines 43-59).

Although the system disclosed by Kisor (USPN 6,098,091) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the interval is at least once every ten minutes.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing an interval of any amount of time. The interval could be changed depending on the length of a given job and the priority of the task. This benefits the system by ensuring that problems will be determined in a timely manner. Further, it allows an administrator to save system resources if a low priority task does not need to be checked as often.

45. Regarding claims 6 and 74, Kisor (USPN 6,098,091) teaches all the limitations as applied to claims 4 and 73, respectively. He further teaches means wherein the act of detecting an absence of expected status message(s) received by the at least one supervisory processor is repeated periodically according to a time interval (column 6, lines 43-59).

Although the system disclosed by Kisor (USPN 6,098,091) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the interval is at least once each minute.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing an interval of any amount of time. The interval could be changed depending on the length of a given job and the priority of the task. This benefits the system by ensuring that problems will be determined in a timely manner. Further, it allows an administrator to save system resources if a low priority task does not need to be checked as often.

46. Regarding claims 7 and 75, Kisor (USPN 6,098,091) teaches all the limitations as applied to claims 4 and 73, respectively. He further teaches means wherein the act of detecting an absence of expected status message(s) received by the at least one supervisory processor is repeated periodically according to a time interval (column 6, lines 43-59).

Although the system disclosed by Kisor (USPN 6,098,091) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the interval is at least once each second.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing an interval of any amount of time. The interval could be changed depending on the length of a given job and the priority of the task. This benefits the system by ensuring that problems will be determined in a timely manner. Further, it allows an administrator to save system resources if a low priority task does not need to be checked as often.

47. Regarding claim 8, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 4. He further teaches means wherein the act of detecting an absence of expected status message(s) received by the at least one supervisory processor is repeated periodically according to a time interval (column 6, lines 43-59).

Although the system disclosed by Kisor (USPN 6,098,091) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the interval is at least once every tenth of a second.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing an interval of any amount of time. The interval could be changed depending on the length of a given job and the priority of the task. This benefits the system by ensuring that problems will be determined in a timely manner. Further, it allows an administrator to save system resources if a low priority task does not need to be checked as often.

48. Regarding claims 22-27, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claim 21) shows substantial features of the claimed invention, it fails to disclose specifically that each of the worker processors is linked to the always-on, peer-to-peer computer network at at least one of the following data rates:

a. 250 kilobits/sec

b. 1 megabit/sec

c. 10 megabits/sec

d. 100 megabits/sec

e. 1 gigabit/sec

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by requiring a specific data rate for each

of the worker processors. This benefits the system by ensuring that the length of processing tasks will not be significantly slowed by network transmission rates.

49. Regarding claims 29-32 and 49-52, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claims 28 and 46) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the process of sending a status request message to, and receiving a return acknowledgement from (heartbeat message), each worker that is expected to be engaged in the processing of tasks is repeated at least the following intervals:

a. Once every second

b. Once every tenth of a second

c. Once every hundredth of a second

d. Once every millisecond

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing a range of monitoring intervals that can be altered. This benefits the system by allowing monitoring to be set according to the importance and length of a processing task.

50. Regarding claims 34-37, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claim 33) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the preselected frequency interval is less than any of the following:

a. One second

b. One tenth of a second

c. One hundredth of a second

d. One millisecond

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing a range of reporting intervals that can be altered. This benefits the system by allowing reporting to be set according to the importance and length of a processing task.

51. Regarding claims 41-45, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claim 40) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the monitoring is performed:

a. Once every 10 seconds

b. Once every second

c. Once every tenth of a second

d. Once every hundredth of a second

e. Once every millisecond

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing a range of monitoring intervals that can be altered. This benefits the system by allowing monitoring to be set according to the importance and length of a processing task.

52. Claims 9-19, and 76-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisor (USPN 6,098,091) in view of Chung et al. (USPN 5,978,829).

53. Regarding claims 9 and 76, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claims 2 and 72, respectively) shows substantial features of the claimed invention, it fails to disclose means wherein monitoring, on a substantially continuous basis, the status of at least the worker processor(s) that have been assigned the non-critical task(s) comprises: detecting the presence of non-assigned-task-related activity on at least the worker processor(s) that have been assigned the non-critical task(s).

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091), as evidenced by Chung et al. (USPN 5,978,829).

In an analogous art, Chung et al. (USPN 5,978,829) discloses a system for the distribution of jobs in a network with means wherein monitoring, on a substantially continuous basis, the status of at least the worker processor(s) that have been assigned the non-critical task(s) comprises: detecting the presence of non-assigned-task-related activity on at least the worker processor(s) that have been assigned the non-critical task(s) (column 6, lines 8-10).

Given the teaching of Chung et al. (USPN 5,978,829), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing the monitoring of activity on the remote machine beyond the execution of the task. This benefits the system by allowing a user to have full use of the remote computer even that user has allowed the particular time to be used (in Kisor (USPN 6,098,091)). A user

will not be forced to execute a remote task if he/she is attempting to use his/her own machine at the time.

54. Regarding claims 10 and 77, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claims 9 and 76, respectively) shows substantial features of the claimed invention, it fails to disclose means wherein detecting the presence of non-assigned-task-related activity includes running an activity monitor program on at least each of the worker processor(s) that have been assigned non-critical task(s).

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091), as evidenced by Chung et al. (USPN 5,978,829).

In an analogous art, Chung et al. (USPN 5,978,829) discloses a system for the distribution of jobs in a network with means wherein detecting the presence of non-assigned-task-related activity includes running an activity monitor program on at least each of the worker processor(s) that have been assigned non-critical task(s) (column 6, lines 8-10).

Given the teaching of Chung et al. (USPN 5,978,829), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing the monitoring of activity on the remote machine beyond the execution of the task. This benefits the system by allowing a user to have full use of the remote computer even that user has allowed the particular time to be used (in Kisor (USPN 6,098,091)). A user will not be forced to execute a remote task if he/she is attempting to use his/her own machine at the time.

55. Regarding claims 11 and 78, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claims 10 and 77, respectively) shows substantial features of the claimed invention, it fails to disclose means wherein the activity monitor programs behave substantially like screen saver programs.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091), as evidenced by Chung et al. (USPN 5,978,829).

In an analogous art, Chung et al. (USPN 5,978,829) discloses a system for the distribution of jobs in a network with means wherein the activity monitor programs behave substantially like screen saver programs (column 6, lines 8-10).

Given the teaching of Chung et al. (USPN 5,978,829), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing the monitoring of activity on the remote machine beyond the execution of the task. This benefits the system by allowing a user to have full use of the remote computer even that user has allowed the particular time to be used (in Kisor (USPN 6,098,091)). A user will not be forced to execute a remote task if he/she is attempting to use his/her own machine at the time.

56. Regarding claims 12-16, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 10. However, neither Kisor (USPN 6,098,091) nor Chung et al. (USPN 5,978,829) points out explicitly that the activity monitor sends a message to the supervisory processor in response to each of the following if they occur:

a. Keyboard activity

b. Mouse activity

c. Pointer activity

d. Touchscreen activity

e. Voice activity

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091) and Chung et al. (USPN 5,978,829).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) and Chung et al. (USPN 5,978,829) by monitoring for any or all of these types of activity. Particularly, Chung et al. (USPN 5,978,829) points out that there is an activity monitor to look for any type of local or remote activity, it does not, however, point out the specific types of activity. These are obvious activities that would indicate user activity at the remote location. This benefits the system by allowing a user's machine to be released immediately upon activity.

57. Regarding claim 17, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claim 10) shows substantial features of the claimed invention, it fails to disclose means wherein the activity monitory programs send, in response to detection of execution of substantial non-assigned-task-related processes, a message to at least one of the at least one supervisory processor(s).

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091), as evidenced by Chung et al. (USPN 5,978,829).

In an analogous art, Chung et al. (USPN 5,978,829) discloses a system for the distribution of jobs in a network with means wherein the activity monitory programs send, in response to detection of execution of substantial non-assigned-task-related processes, a message to at least one of the at least one supervisory processor(s) (column 6, lines 10-11).

Given the teaching of Chung et al. (USPN 5,978,829), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing the notification of a substantial amount of processing activity on the remote machine not related to the assigned task. This benefits the system by allowing the supervisory processor to stop the assigned task if the user of the remote machine has run a different, processor intensive task at the same time. Also, it benefits the system by allowing the supervisory processor to avoid slow task completion due to a busy remote processor.

58. Regarding claim 18, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claim 9) shows substantial features of the claimed invention, it fails to disclose means wherein detecting the presence of non-assigned-task-related activity includes determining, in response to an activity monitor message received by at least one of the at least one supervisory of the processor(s), that at least one of the worker processors is undertaking non-assigned-task-related activity.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091), as evidenced by Chung et al. (USPN 5,978,829).

In an analogous art, Chung et al. (USPN 5,978,829) discloses a system for the distribution of jobs in a network with means wherein detecting the presence of non-assigned-

task-related activity includes determining, in response to an activity monitor message received by at least one of the at least one supervisory of the processor(s), that at least one of the worker processors is undertaking non-assigned-task-related activity (column 6, lines 8-13).

Given the teaching of Chung et al. (USPN 5,978,829), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing the monitoring of activity on the remote machine beyond the execution of the task. This benefits the system by allowing a user to have full use of the remote computer even that user has allowed the particular time to be used (in Kisor (USPN 6,098,091)). A user will not be forced to execute a remote task if he/she is attempting to use his/her own machine at the time.

59. Regarding claim 19, although the system disclosed by Kisor (USPN 6,098,091) (as applied to claim 18) shows substantial features of the claimed invention, it fails to disclose means wherein the activity monitor message is generated by an activity monitor program running on one of the assigned worker processors.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091), as evidenced by Chung et al. (USPN 5,978,829).

In an analogous art, Chung et al. (USPN 5,978,829) discloses a system for the distribution of jobs in a network with means wherein the activity monitor message is generated by an activity monitor program running on one of the assigned worker processors (column 6, lines 8-13).

Given the teaching of Chung et al. (USPN 5,978,829), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) by employing the monitoring of activity on the remote machine beyond the execution of the task. This benefits the system by allowing a user to have full use of the remote computer even that user has allowed the particular time to be used (in Kisor (USPN 6,098,091)). A user will not be forced to execute a remote task if he/she is attempting to use his/her own machine at the time.

60. Regarding claims 79 and 80, Kisor (USPN 6,098,091) teaches all the limitations as applied to claim 77. Kisor (USPN 6,098,091) further teaches means wherein the activity monitor programs detect execution of substantial non-assigned-task-related processes (column 6, lines 10-11). However, neither Kisor (USPN 6,098,091) nor Chung et al. (USPN 5,978,829) points out explicitly that the activity monitor sends a message to the supervisory processor in response to each of the following (either one or more) if they occur:

a. Keyboard activity

b. Mouse activity

c. Pointer activity

d. Touchscreen activity

e. Voice activity

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Kisor (USPN 6,098,091) and Chung et al. (USPN 5,978,829).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Kisor (USPN 6,098,091) and Chung et al. (USPN 5,978,829) by monitoring for any or all of these types of activity. Particularly, Chung et al. (USPN 5,978,829) points out that there is an activity monitor to look for any type of local or remote activity, it does not, however, point out the specific types of activity. These are obvious activities that would indicate user activity at the remote location. This benefits the system by allowing a user's machine to be released immediately upon activity.

Conclusion

61. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see the following:

a. Xu (USPN 6,418,462)

b. Suarez (5,790,789)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Parton whose telephone number is (703)306-0543. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703)305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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